РОССИЙСКАЯ АКАДЕМИЯ НАУК ИНСТИТУТ ИСТОРИИ МАТЕРИАЛЬНОЙ КУЛЬТУРЫ

ДРЕВНИЕ КУЛЬТУРЫ ЕВРАЗИИ

Материалы международной научной конференции, посвященной 100-летию со дня рождения А. Н. Бернштама

am

САНКТ-ПЕТЕРБУРГ 2010

RUSSIAN ACADEMY OF SCIENCES

INSTITUTE FOR THE HISTORY OF MATERIAL CULTURE

ANCIENT CULTURES OF EURASIA

Proceedings of the International conference dedicated to the 100th anniversary of the birth of A. N. Bernshtam

ST. PETERSBURG 2010

CONTENTS

A. N. BERNSTAM'S ACADEMIC LEGACY IN ARCHAEOLOGY	
V. A. Alekshin (St. Petersburg, Russia). Alexander Natanovich Bernshtam: a biographical essay	9
G. V. Dluzhnevskaya (St. Petersburg, Russia). Academic legacy of Alexander Natanovich Bernshtam	
in the Archive of IHMC RAS	22
E. E. Kuzmina (Moscow, Russia). A. N. Bernshtam and his place in the history	
of Kazakhstan and Kyrgyzstan	27
ARCHAEOLOGY OF THE BRONZE AND EARLY IRON AGE OF EURASIA	
V. A. Alekshin (St. Petersburg, Russia). Metal cosmetic rods with a spatula-like head from Altyn-depe	34
S. V. Baratov (Samarkand, Uzbekistan). To the problem of autochthonous Bronze Age cultures	
in Central Asia	44
V. I. Artemiev (Tashkent, Uzbekistan). Architectural reconstruction of Gonur-depe —	
the capital of Margiana civilization	53
A. M. Urmanova (Tashkent, Uzbekistan). Archtectural analysis of buildings	
from the Gonur-depe settlement in Turkmenistan	6 0
V. I. Mamontov (Volgograd, Russia). Clay models of «vehicles» of the Catacomb culture	
from the Volga-Don steppes	68
M. Yu. Fedosov (Volgograd, Russia). Burials containing the pottery decorated with herringbone patterns	
in the context of the Donetz Catacomb culture of the Lower Don region	71
A. V. Polyakov (St. Petersburg, Russia). Commemorative construction	
of the Okunevo culture on Lake Itkol'	75
M. E. Kilunovskaya (St. Petersburg, Russia). Image of Hittite god Runda on a silver rhyton	
from the Metropolitan Museum	80
L. A. Sokolova (St. Petersburg, Russia). Evidence of contacts between the Okunevo and	
Harappan cultures	
A. M. Bianki (St. Petersburg, Russia). Group of dolmens as a site type	
N. A. Bokovenko (St. Petersburg, Russia). Beginning of the Tagar culture	99
E. Kaiser (Berlin, Germany). Isotopic analysis and the question of mobility	
of the Eurasian steppe tribes	. 104
N. I. Shishlina (Moscow, Russia). Isotopic archive of the Eurasian steppe nomads of the Bronze Age:	
results and interpretation	. 104
A. Gass (Berlin, Germany). Problems associated with the geoarchaeological study	
of the Early Iron Age sites in the south-eastern part of Semirechie	. 112
ARCHAEOLOGY OF THE IRON AGE OF EURASIA	
A.C. Balakhvantsev (Moscow, Russia). On the time and circumstances of the appearance	
of the Achaemenid imports in Southern Ural	. 116
N. Bandrivsky (L'vov, Ukraine). Bone heads of psalia from the Middle Dniester area:	
stylistic peculiarities and the problem of interpretation	
G. I. Bogomolov (Tashkent, Uzbekistan). To the discussion of the initial stages of urbanization of Chach	. 127
M. A. Bubnova (Dushanbe, Tajikistan). Who mastered the pastures of Eastern Pamir	
in the 1 st millennium BC?	. 135
E. B. Vadetskaya (St. Petersburg, Russia). A. N. Bernshtam's views on the controversial	
«Xiongnu» period sites in the Middle Yenisei	142
V. V. Gusakov (Kiev, Ukraine). Political model of the interaction between the Saks-Massagets and	
the Achaemenid state: formation, main principles, effectiveness	
Yu. I. Elikhina (St. Petersburg, Russia). Bactrian fabrics from the collection of the State Hermitage	. 153
M. T. Kashuba, G. I. Smirnova, M. Yu. Vakhtina (St. Petersburg, Russia). Nemirovskoe settlement:	150
hundred years of research	. 136
S. V. Krasnienko (St. Petersburg, Russia). Hun-Sarmatian time in the north of the Minusinsk depression (archaeological data).	167
VAICHAEUIURICAI (1818)	. וחי

J. A. Lerner (New York, USA). Hephthalites and others through their seals	
in Bactria and Greater Gandhara	171
K. M. Linduff, K. S. Rubinson (Pittsburg, New York, USA). Exchange of metallurgical technology,	
objects and people in Eurasia in the late 1 st millennium BCE-early 1 st millennium CE	172
S. S. Minyaev (St. Petersburg, Russia). To the interpretation of some finds from Noyon uul	182
N. N. Nikolaev (St. Petersburg, Russia). Xiongnu cemetery in the Orgoiton creek valley	
(a preliminary report)	186
V. P. Nikonorov (St. Petersburg, Russia). Attila's hun host: calvary or infantry?	192
M. J. Olbrycht (Rzeszów, Poland). Central Asian, Achaemenid and Parthian cavalry developments	196
V. S. Patrushev (Yoshkar-Ola, Russia). Uralian peoples and the Iranian-speaking nomads	
of the Eurasian steppes (cultural contacts as reflected in art objects)	201
A. Podushkin (Chimkent, Kazakhstan). Sarmatians in Southern Kazakhstan	207
Yu. B. Polidovich (Donetsk, Ukraine). Finds from the barrow of Arzhan 2 in Tuva and	
the «animal style» of the Northern Black Sea region: searching for parallels	217
M. N. Pshenitsyna (St. Petersburg, Russia). Tagar cemetery of Ulug-Kyuzyur on the Middle Yenisei	225
T. V. Ryabkova (St. Petersburg, Russia). Pamirskaya 1, barrow 10	
(to the question of the cultural and chronological affinities of the assemblage)	237
Vl. A. Semenov (St. Petersburg, Russia). Kosh-Pei barrows	
in the Tuvinian «Valley of the Kings» (VI–V cc. BC)	
O. S. Sovetova (Kemerovo, Russia). Subject of «sacral marriage» in rock art	246
L. T. Yablonsky (Moscow, Russia). Transition to the Zoroastrian funeral rite	
among the stock-breeders of Khorezm	252
ARCHAEOLOGY OF MEDIEVAL EURASIA	
D. Abdulloev (St. Petersburg, Russia). Spreading of Islam in «ajam»	259
A. S. Guneri (Izmir, Turkey). The "Archaeological Sources of the Turkic Culture	
in Central Eurasia (OTAK)" project: Works in Mongolian Altai, 2009–2010	
R. G. Zhamsaranova (Chita, Russia). On the ethnonym «Jurchen»	270
S. G. Klyashtornyi (St. Petersburg, Russia). Ordubalyk: the burth of urban culture	
in the Uighur Khaganate	276
P. B. Lurie (St. Petersburg, Russia). Karluks and Yaglakars in the Sogdian numismatics of Semirechie	279
A. A. Musakaeva (Tashkent, Uzbekistan). Byzantine coin of the Emperor Arcadius	
from the Kanka settlement	285
N. N. Seregin (Barnaul, Russia). Reconstruction of the social organization	
of the Early Medieval Turks of the Sayan-Altai region: sources, problems, methods	
E. A. Smagulov (Alma-Ata, Kazakhstan). Karatobe settlement as a part	
of the Sauran archaeological complex	294
V. S. Soloviev (Eletz, Russia). Interaction between farming and nomadic cultures	
in the Early Medieval Tokharistan	298
A. I. Torgoev (St. Petersburg, Russia), V. A. Kol'chenko (Bishkek, Kyrgyzstan).	
On the stratigraphy and dating of the lower layers of the Krasnorechenskoe settlement	
M. L. Shvetsov (Donetsk, Ukraine). Turkic world of the East European steppe	311
HISTORY OF ARCHAEOLOGICAL EXPLORATIONS IN CENTRAL ASIA	
M. Grechishina (Kharkov, Ukraine). Alexei Ivanovich Terenozhkin's archaeological works	
in Kyrgyzstan and Kazakhstan (1929–1936)	
List of abbreviations	325

дилс гг., *1*

рии соста

лепа ботк водо

по стях 15 вите ти К рота шта: долх

1920 безу д. 79

дан 193

леті чил

пол по 1

вкл Крі выс

му РА

уча Кеј

крі

8

Bachrach 1994 — Bachrach B. S. The Hun Army at the Battle of Chalons (451): An Essay in Military Demography // Ethnogenese und Überlieferung. Angewandte Methoden der Frühmittelalterforschung. Wien; München, 1994. P. 59–67.

Bökönyi 1974 — Bökönyi S. History of Domestic Mammals in Central and Eastern Europe. Budapest, 1974.

Elton 1997 — Elton H. Warfare in Roman Europe, A.D. 350-425. Oxford, 1997.

Ferrill 1991 — Ferrill A. The Fall of the Roman Empire: the military explanation. New York, 1991.

Heather 1999 — Heather P. Afterword // Thompson E. A. The Huns / Revised and with an afterword by P. Heather. Oxford; Malden, 1999. P. 238-264.

Keegan 1993 — Keegan J. A History of Warfare. New York, 1993.

Lebedynsky 2001 — *Lebedynsky I.* Armes et guerriers barbares au temps des Grandes Invasions (IV^e au VI^e siècle apres J.-C.). Paris.

Lindner 1981 — Lindner R. P. Nomadism, Horses and Huns // Past and Present. Oxford, 1981. No. 92. P. 3-19.

Lindner 1982 — *Lindner R. P.* What was a Nomadic Tribe? // Comparative Studies in Society and History. Cambridge, 1982. Vol. 24, no. 4. P. 689–711.

Maenchen-Helfen 1973 — Maenchen-Helfen O. J. The World of the Huns: Studies in Their History and Culture. Berkeley; Los Angeles; London, 1973.

Nicolle 2000 — Nicolle D. Attila and the Huns. Oxford, 2000.

Sidebottom 2004 — Sidebottom H. Ancient Warfare: A Very Short Introduction. Oxford, 2004.

Sinor 1990 — Sinor D. The Hun period // The Cambridge History of Early Inner Asia. Cambridge; New York; Port Chester; Melbourne; Sydney, 1990. P. 177–205.

Sinor 1993 — Sinor D. The Historical Attila // Attila: The Man and His Image. Budapest, 1993. P. 3-15.

M. J. Olbrycht (Rzeszów, Poland)

Central Asian, Achaemenid and Parthian Cavalry Developments

According to written, archaeological and numismatic materials, nomadic factor played an important part in Parthian warfare. Recent archaeological evidence allows for an enhanced appreciation of the nomadic factor in the establishment of the Arsacid state (cf. Koshelenko 1980; Nikonorov 1994; Olbrycht 2001; 2003). Links between Arsacid Parthian culture and the steppe peoples' civilization are discernable in some aspects of Parthian art and in Parthian costume. Parthian social structure was closely connected with the state's military organization, which for the most part was founded on nomadic practices inherited from the Dahae and the Aparni. Horse-riding became a symbol of a high social status, and that phenomenon can be explained as the continuation of a steppe tradition. The principal under which the social structure of the Arsacid heartland and of Arsacid Parthia operated was the nomadic legacy of the Aparni. In the Parthian regular army of the Arsacid epoch only cavalry units formed the real kernel of Parthian military power, and we hear nothing about infantry from among the Parthian nobility. In the Arsacid period, the army of the Parthians relied on cavalry, their infantry being relatively weak. The Parthian cavalry, surrounded by a glamour possessed by no other ancient people, comprised two main fighting arms: mounted archers (in Greek hippotoxotai) and heavy cavalrymen (in Greek kataphraktoi), the latter armed with long lances and protected, both man and horse, with armor elements (Plut. Crass. 24f.; Cassius Dio 40.15.2). Against the enemy, the Parthians were generally successful if they took care to combine both kinds of troops and to fight on appropriate ground (Pugachenkova 1966: 31, 43; Khazanov 1971: 75, 93; Nikonorov 1995: 56; 1998).

It is difficult to reconstruct the development of the Arsacid cavalry. In particular, it is impossible to follow their beginnings closely, for the information up to the battle of Carrhae (53 BC) is scanty. However, important starting points for this question and essential indications may be found in the history of Western and Central Asian warfare in the Achaemenid and Hellenistic periods.

In the Achaemenid period, the cavalry forces of Central Asian steppe peoples, including the Dahae, Massagetae, Sacae, and from Bactria-Sogdiana, as well as horsemen from Eastern Iran, including Parthians, belonged to the elite of the Achaemenid army (Litvinskiy/P'yankov, "Voennoe delo"). In some campaigns, however, the Achaemenid commanders used their cavalry forces under rather inappropriate circumstances (e. g. at Plataiai, 479 BC). Moreover, Achaemenid mounted warriors rarely could efficiently cooperate with other units of their army. Nevertheless, in several attested military engagements (including Kunaxa in 401 BC), the Achaemenid horsemen exhibited their combat valor and efficiency, and at the beginning of the 4th century BC, Greek troops operating in Asia Minor were seriously afraid of Persian cavalry attacks (see Xen. Hell. 3.4.15; Anab. 6.5.29).

Probably the best heavily armored cavalry among the steppe peoples living on the borders of the Achaemenid empire was evolved by the Massagetae. Herodotus (1.215) and Strabo (11.8.6) mention breastplates for horses and corselets for riders amongst the Massagetae. This record relates probably to the campaigns of Cyrus the Great against the Massagetae conducted in 530 in which the Persians were defaeted and Cyrus fell (Hdt. 1.201 ff.).

The later Persian heavily-armored horsemen were inspired by the Central Asian model. The first unambiguously attested use of horse-armor by Persian cavalry is that of Cyrus the Younger's elite unit in 401 BC. These cavalrymen were armored with cuirasses and thigh-protections (*parameridia*). Their horses had armor for the forehead and breast (Xen. Anab. 1.8.6). Xenophon mentions armored Persian horses under Cyrus the Great (Xen. Kyr. 6.1.50 f.; 6.4.1; 7.1.2) but this testimony seems to be anachronistic and mirrors, in fact, the realities of the Xenophon's lifetime (about 400 BC). In particular, this record mentions armor side-pieces (*parapleuridia*) protecting both the horse and the rider's thighs (Xen. *Kyr*. 6.1.50 f.; 7.1.2).

At Issos (333 BC), the Persian king Darius III intended the issue decided in a cavalry engagement (Curt. 3.11.1). He used some heavily armored cavalry who fought under chiliarchos Nabarzanes on the Persian right wing. The horses and riders were armored with rows of armor-plating (serie lamnarum grave agmen). After the Issos defeat, Darius III carried out essential reforms to enhance the striking combat power of the Achaemenid forces (332–331). It was within those preparations that the Persian king equipped some of his soldiers with longer spears (xysta) and swords (xyphoi) than before, "because it was thought that Alexander had had a great advantage in this respect in the battle of Issos" (Diod. 17.53.1). For the cavalry and horses protective coverings made of interconnected iron plates were produced during the reforms carried out by Darius III and his staff.

The importance of contingents from Eastern Iran and Central Asia to the Achaemenid army is best illustrated by their role at the battle of Gaugamela fought against Alexander the Great's army (331 BC). Darius III's commanding staff, including the satrap of Bactria-Sogdiana Bessos, and the satrap Mazaios, relied chiefly on heavily armored cavalry in conjuction with light horsemen or mounted javelinmen. The new units charged vigorously hoping to break the Macedonian front and to outflank the enemy. Indeed, the most formidable Iranian cavalry formations were successful in several clashes against picked Macedonian units. The fiercest fight took place when Alexander broke his pursuit of Darius and became involved in a bloody clash with a large body of retreating Persian, Parthian and Indian cavalry (Arr. 3.15.1– 2; Curt. 4.16.20–25). The ability to break through choice Macedonian formations, showed by Iranian cavalry several times at Gaugamela, implies that they were the reformed armored cavalry, probably using long lances. These cavalrymen can be termed the cataphracts. Additionally, Darius' staff realized that heavy cavalry without support of mounted archers or javeliners is highly vulnerable, as had been demonstrated at Issos. Therefore, the main striking divisions of the Achaemenid army, led by Bessos and Mazaios, contained picked units of horse archers and mounted javeliners. It was errors in Persian tactics, weak coordination of different formations on the battlefield and sluggish strategy that proved again inefficient and the power of the Achaemenids collapsed.

The most dangerous enemy of Alexander in Central Asia was Spitamenes and his superb Bactrian and Sogdian cavalry forces, supported by the cavalry of the nomadic Dahae and Massagetae which rather

avoided bigger battles and specialized in hit-and-run raids and ambushes. The mobility of Spitamenes' forces and his skill of attacking in the least expected place and time deprived Alexander of the strategic initiative, the thing which occurred for the first time during his campaign in Asia. Alexander the Great had to employ new strategy and tactics, better suited to local conditions and enemy capabilities which revealed vulnerabilities of the Macedonian army (329–327 BC).

In 329 BC, a sizable Macedonian corps under Pharnuches' command suffered a complete defeat at the Polytimetos (Zeravshan) river. It was characteristic for Central Asian Iranian tactics how they handled the clash: Spitamenes drew the enemy into a trap and destroyed them. The cavalry of the Dahae, the most mobile unit, surrounded Pharnuches' forces (Curt. 7.7.31–33). Having encircled the Macedonians, the Iranians showering them with volleys of arrows (Arr. 4.5.5 f.). Spitamenes must have used heavy or medium cavalry for many Macedonians died not due to missiles but were killed in hand to hand combat against charging horsemen (Curt. 7.7.34–37). The Iranian cavalry fought in the wedge-shaped formation (Curt. 7.7.35). In his *Taktika*, Ailianos underscores that the Scythians, the Thracians, and the Macedonians from Philip II onwards used wedge-shaped cavalry formations (18.4), while Persians and most Greeks preferred square formations (18.5).

The most important allied contingents in Spitamenes' army were supplied by Massagetae and Dahae. The Massagetae probably formed medium and heavy cavalry, the traditional force of their tribe. Not accidentally, the oldest depiction of a heavily armored horsemen who may be called the cataphract comes from Khoresm, an area traditionally connected with and even long subordinated to the Massagetae — a relief from Khumbuz-tepe shows an armored horse and rider with a spear. The object is datable to the end of the 4th-beginning of the 3rd c. BC (Litvinskij 2001: 339, gives 4th-3rd century BC). The site is located in southern Khoresm on the border between farming soil and the nomads dominated steppes. A depiction of an unarmored Iranian rider with the long lance comes from Koi-krylgan-kala in Khoresm. This ceramic fragment shows a horseman with a very long spear held with both hands. Recently, another depiction on a ceramic fragment found at Kalaly-gyr 2 in Khoresm has been published, showing a rider with a spear (Vainberg 2004: pict. 7, 14–15). The object is datable to the 3rd century BC. From Chirik-Rabat to the east of the Aral Sea, some pieces of heavy armor come, having belonged to a nomadic warrior, have been found (Olbrycht 2004: 144 f.). Thus it seems certain that already in the late 4th and 3rd centuries BC, the Khoresmians and the neighbouring nomads, including the Massagetae, employed the heavily armored and light cavalry using long spears, i. e. the cataphracts and the lancers (kontophoroi).

In all probability, Spitamenes, emulating Macedonian arms, introduced long lances among his troops which gave his riders a powerful tool to inflict losses on the enemy. Spitamenes may have belonged to the commanding staff next to Darius III, which carried out essential reforms to enhance the striking combat power of the Achaemenid forces before the battle of Gaugamela (331). The reforms in Iranian military formations, forced by Macedonian threat and conducted by Darius III's staff, were apparently continued by Spitamenes who was aware of Macedonian danger and finally had to fight against Alexander's army in Central Asia. It should be highlighted that Spitamenes' effectivness stemmed from his superb strategy and tactis which relied on combining different types of cavalry including not only heavy cavalry but also horse archers and javeliners. Essential were mounted javelin-men who threw spears from a distance. Conceivably, Spitamenes used also other types of cavalry, including regular lancers (kontophoroi).

Alexander the Great fully recognized the quality of the nomadic cavalry troops. As a result, he used troops of the Dahae, Massagetae, Bactrians and Sogdians in the campaigns in India and southern Iran. The key actors in Alexander's army fighting on the Hydaspes (326) included Dahae, Bactrians, Sogdians, and Massagetae/Scythians. A glance at the list of Iranian formations in Alexander's army on the Hydaspes suggests one conclusion: it is an exact replica of the composition of Spitamenes' force of cavalry.

In the Diadochoi and early Hellenistic period, cavalry contingents from Iran and Turkestan often played the decisive part in the military confrontations. One of the most capable cavalry commanders of

this period was Peithon, the satrap of Media. The bulk of his army was formed by mounted soldiers from Media and pre-Arsacid Parthia. The overwhelming superiority of Peithon's Iranian cavalry enabled him to win a victory over the revolted Geeks of the Upper satrapies in 323 BC (Diod. 18.7.1–9). In Paraitakene (316), Peithon commanded a mighty cavalry division (Diod. 19.26.1–32.3). In Gabiene (315), Peithon's cavalry turned the battle into a spectacular success of Antigonos (Diod. 19.39.6–44.3). The Iranian cavalry were the real military mainstay of Seleukos' armed forces up to 301 BC, a fact neglected by most scholars (Olbrycht 2005).

In developing their warfare, the Iranians of the pre-Arsacid period, and then the Arsacid Parthians had to take into account Hellenistic innovations brought into Iran and Central Asia by Alexander the Great and his successors. Arsacid mounted archers and cataphracts were complementary, each providing the others with powers not inherent in either separately. The horse-bowmen could swarm around the enemy's troops, shooting them down from a safe distance, for Parthian bows were extremely efficient. If the enemy tried to attack, the Parthian horse retreated and then repeatedly attacked. The broken enemy's lines were charged by the cataphracts. The long lances of the cataphracts, imitating the Macedonian shaft weapons, but somewhat stronger, and heavy armor made them able to crush the Macedonian phalanx, Hellenistic cavalry formations, and Roman legions.

Our knowledge of Parthian cataphracts and horse archers comes mainly from accounts of wars between Arsacid Iran and Rome. The most detailed description of the Arsacid cataphracts and mounted bowmen offers Plutarch in his account of the Carrhae battle (53 BC; Plut. Crass. 23.8–27.2; see also Dio 40.21.1–24.1). The Parthians demonstrated there the high effectiveness of the combined cavalry types tactics. The development of the Arsacid cavalry before Carrhae can be reconstructed only fragmentary. There is some evidence of the early Arsacid influence on Seleucid military practices, including the employment of horse archers and cataphracts.

For the first time Parthian cataphracts are directly attested at the battle of Tigranocerta in 69 BC., fighting against a Roman army under Lucullus (Plut. Luc. 26–28; Frontinus 2.2.4; App. Mithr. 85). The Parthian cataphracts were part of the army led by the Armenian king Tigranes, consisting of the Armenians, Gordyeni, Medes, Adiabeni, Arabs, Albanians, and Iberians (Plut. Luc. 26.1–5). According to Plutarch, Tigranes' army included 17,000 cataphracts, mostly from Media Atropatene. Media Atropatene belonged to the Parthian empire since ca. 148 BC, and its warfare must have emulated Parthian military practices. Shortly after 80 BC, Tigranes concluded a treaty of alliance with Atropatene and thus gained the excellent cavalry from this country. Some cataphracts may have been provided by the ruler of Adiabene and Tigranes himself.

According to Plutarch (Luc. 28.1–7), Lucullus discerned that the cataphracts, "on whom the greatest reliance was placed" (Plut. Luc. 28.2), were stationed at the foot of a considerable hill. The Roman commander ordered his men to attack the cataphracts who were driven back. Significantly, they were not screened by lighter troops. Tigranes proved a bad commander for he lost the initiative just at the beginning of the battle. The Median cataphracts played no active role – they did not even start a charge when they were attacked by the Romans.

The battle of Carrhae showed that the properly used combined forces of Parthian cataphracts and mounted archers were able to crush Roman forces. At Carrhae, The Iranian army under Surena consisted, according to Plutarch, of 1,000 fully armored horsemen, the cataphracts, and 9,000 horse-archers (Nikonorov 1995).

During the 1st century BC, cataphracts cavalry appeared in those areas of Western Asia, which were influenced or subjugated by the Parthians, including Armenia, Adiabene (Ios. Ant. 20.86), and Oshroene (Arr. Parth. Fr. 46). Artavasdes II of Armenia commanded a force of 10,000 cavalry in 53 BC. Armenian cavalry consisted of cataphracts and horse archers (Plut. Crass. 18.3, 19.1; Plut. Ant. 50.5; Strab. 11.4.4, 11.14.9). Cataphracts also developed amongst the Sarmatian tribes, the nomads of Central Asia and the Indo-Iranian borderland (including the Sacae) and in Bactria of the pre-Kushan und Kushan period (Bopearachchi, Sachs 2001; Mielczarek 1993).

Summing up: In developing their cavalry, the Arsacids followed traditions of the Central Asian steppe peoples of the Dahae and Massagetae and, to some extent, of pre-Arsacid Parthia. At the same time, they adopted and improved some components of Hellenistic warfare. The nomadic subjugation of Iran under Arsaces I caused a shift over to a reliance upon cavalry as the primary tactical arm. On the whole, the new tactics and arms, as employed by the Arsacids, proved astonishingly efficient, and enabled them decisive victories over the Seleucids and other powers in Asia, including the Roman Empire.

- Bopearachchi, Sachs 2001 *Bopearachchi O., Sachs C.* Armures et armes des Indo-Scythes d'après leurs émissions monétaires et les données archéologiques // Topoi. 2001. No. 11. P. 321-355.
- Khazanov 1971 Khazanov A. M. (Хазанов A. M.) Ocherki voennogo dela sarmatov (Очерки военного дела сарматов). М., 1971.
- Koshelenko 1980 Koshelenko G. A. Les cavaliers parthes. Aspects de la structure sociale de la Parthie // DHA 6. Annales littéraires de l'Université de Besançon. 1980. No. 251. P. 177–199.
- Litvinskiy 2001 Litvinskiy B. A. (Литвинский Б. А.) Khram Oksa (Храм Окса). М., 2001. Vol. 2.
- Litvinskiy, P'yankov 1966 Litvinskiy B. A., P'yankov I. V. (Литвинский Б. А., Пьянков И. В.) Voennoe delo u narodov Sredney Azii v VI–IV vv. do n. е. (Военное дело у народов Средней Азии в VI–IV вв. до н. э. // VDI (ВДИ). 1966. № 3. S. 36–52.
- Mielczarek 1993 *Mielczarek M.* Cataphracti and Clibanarii. Studies on the Heavy Armoured Cavalry of the Ancient World. Łódź, 1993.
- Nikonorov 1994 Nikonorov V. P. (Никоноров В. П.) Sredneaziatskie katafraktarii kak produkt vzaimodeistviya voennykh shkol Zapada i Vostoka v epokhu rannego ellinizma (Среднеазиатские катафрактарии как продукт взаимодействия военных школ Запада и Востока в эпоху раннего эллинизма) // Vzaimodeistvie drevnikh kultur i tsivilizatsiĭ i ritmy kulturogeneza (Взаимодействие древних культур и цивилизаций и ритмы культурогенеза). Sankt-Petersburg, 1994. S. 47–51.
- Nikonorov 1995 Nikonorov V. Р. (Никоноров В. П.) К voprosu o parfianskoy taktike (na primere bitvy pri Karrakh) [К вопросу о парфянской тактике (на примере битвы при Каррах)] // Voennoe delo i srednevekovaya arkheologiya Tsentralnoy Azii (Военное дело и средневековая археология Центральной Азии). Кетегоvo, 1995. S. 53-61.
- Nikonorov 1998 *Nikonorov V. P.* Cataphracti, Catafractarii and Clibanarii: Another Look at the Old Problem of Their Identifications // Military Archaeology: Weaponry and Warfare in the Historical and Social Perspective. St. Petersburg, 1998. P. 131–138.
- Olbrycht 2001 Olbrycht M. J. The Origins of the Arsacid Parthian Cavalry: Some Remarks // The Role of Ahalteke Horse in the Formation of World Horse-Breeding. Ashgabat, 2001. P. 108–111.
- Olbrycht 2003 Olbrycht M. J. Parthia and Nomads of Central Asia. Elements of Steppe Origin in the Social and Military Developments of Arsakid Iran // Militär und Staatlichkeit. Mitteilungen des SFB. Differenz und Integration. 5. Halle/Saale, 2003. S. 69–109.
- Olbrycht 2004 Olbrycht M. J. Alexander the Great and the Iranian world. Rzeszów, 2004 (in Polish).
- Olbrycht 2005 Olbrycht M. J. Creating an Empire: Iran and Middle Asia in the Policy of Seleukos I // Tsentral'naya Aziya ot Akhemenidov do Timuridov (Центральная Азия от Ахеменидов до Тимуридов). Sankt-Petersburg, 2005. S. 231–234.
- Pugachenkova 1966 *Pugachenkova G. A. (Пугаченкова Г. А.)* O pantsirnom vooruzhenii parfianskogo i baktriiskogo voinstva (О панцирном вооружении парфянского и бактрийского воинства) // VDI (ВДИ). 1966. № 2. S. 27–43.
- Vainberg 2004 Vainberg B. I. (Вайнберг Б. И.) Kalaly-gyr 2 (Калалы-гыр 2). М., 2004.